Exercises

E8.85 [OKX] Let $\mathcal{B}$ be a base for a topology τ on X; then the following two properties apply.

(a) $\bigcup \mathcal{B} = X$ that is, the union of all the elements of the base is X.

(b) Given $B_1, B_2 \in \mathcal{B}$ for each $x \in B_1 \cap B_2$ there exists $B_3 \in \mathcal{B}$ such that $x \in B_3 \subseteq B_1 \cap B_2$.

Solution 1. *[OKY]*